



UNITED STATES DEPARTMENT OF COMMERCE
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Thu

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/199,655	11/25/98	MATHIES	R 71180-024827

IM62/0829
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EXAMINER

BEX, P

ART UNIT	PAPER NUMBER
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1743

DATE MAILED:

8
08/29/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/199,655

Applicant(s)

Mathlies et al.

Examiner

Patricia Kathryn Bex

Group Art Unit

1743



☒ Responsive to communication(s) filed on Jun 14, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1035 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-35 is/are pending in the application

Of the above, claim(s) 15-30 is/are withdrawn from consideration

☒ Claim(s) 14 is/are allowed.

☒ Claim(s) 1-13 and 31-35 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 7

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

1. The cancellation of claims 4-5, 7-8 and the addition of claims 31-35 is acknowledged and has been entered into the record.

Election/Restriction

2. Applicant's election with traverse of Group I, claims 1-14 in Paper No. 6 is acknowledged. The traversal is on the ground(s) that the apparatus as claimed cannot be used for the separation of biomolecules by electrophoresis. This is not found persuasive because the inventions as claimed are clearly distinct and capable of supporting separate patents within the means of 35 U.S.C 121. The record set forth in the previous restriction requirement clearly indicates that the delineated inventions are in fact patentably distinct each from the other or independent each from the other and would require undue burdensome search and examination.

The requirement is still deemed proper and is therefore made FINAL.

3. A complete reply to the final rejection must include cancellation of nonelected claims 15-30 or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the liquid-handling system comprising a third container wherein the first end of the second tube is positioned near the bottom of the second container, the second end of the second tube is positioned at or above the

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third container, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Specification

5. The amendment filed June 14, 2000 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: in claim 32, a liquid-handling system “wherein at least two capillary tubes, each of which has a first end and a second end, wherein the first end is positioned near the bottom of the first container and the second end is positioned at or above one of the second containers and the tubes extend through the housing”. The support cited for this amendment at page 10, lines 17-23 describes “the unprecedented adaptability for transferring solutions from one reservoir to multiple reservoirs. This loading methodology is likewise used to fill the cathode and waste reservoirs, useful for a variety of applications. For example, CAE microplates have been generated which use standard cross injectors on a 4 inch diameter substrate...” which includes no mention of a system for transferring liquid between containers, wherein at least two capillaries terminate at a single container at one of their ends, and at one single container at their opposite end.

Further material which is not supported by the original disclosure is as follows: in claim 35 the fluid-handling system comprising a third container wherein the first end of the second tube is positioned near the bottom of the second container, the second end of the second tube is

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positioned at or above the third container. The support cited for this amendment is at page 13, lines 12-20 which describes “ a two, or more, capillary per reservoir system can be used, for simultaneous removal of loading from a capillary array...whereby one capillary is used to vacuum remove the undesired liquids and the second capillary is used to deposit the new liquids”, see Fig. 7, which includes no mention of a third container as disclosed in claim 35.

Applicant is required to cancel the new matter in the reply to this Office action.

Claim Objections

6. Claim 33 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claim recites the limitation wherein two second ends of two capillary tubes are positioned at or above one second container which is recited in lines 7-8 of Claim 32.

Claim Rejections - 35 U.S.C. § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 32-35 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one

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skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 32 discloses the use of at least two capillary tubes, each of which has a first end and a second end, wherein the first end is positioned near the bottom of the first container and the second end is positioned at or above one of the second containers and the tubes extend through the housing, which is not disclosed in the instant specification. Further, Figures 1-7 show no system for transferring liquid between containers wherein multiple capillary tubes originate and terminate into a single container.

Claim 35 discloses the use of a fluid-handling system comprising a third container wherein the first end of the second tube is positioned near the bottom of the second container, the second end of the second tube is positioned at or above the third container, which is not properly disclosed in the instant specification. Further, Figures 1-7 show no system for transferring liquid between containers comprising the use of a third container.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 9 recites the broad recitation other chemically nonreactive material, and the claim also recites polyamide, polyethylene, polypropylene, polytetrafluoroethylene, polyester, PEEK, pulled glass, pulled glass with external coating which is the narrower statement of the range/limitation.

Claim Rejections - 35 U.S.C. § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) a patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 1-13, 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson et al. (WO 97/34138).

Wilson teaches a system for transferring liquid comprising a first container 70, a second container 31, a housing 30 encasing the first container in a pressure-tight manner, a plurality of capillary tubes 34 having a predetermined length and diameter, wherein a first end 36 of the tube is positioned near the bottom of the first container and extends to a second container²¹, wherein the tube extends through the housing, terminating in a second end 38 positioned at or above the second container, and whereby at least one of the liquid contained in the first container is transferred through the capillary tube to the second container where the pressure gradient or difference is applied and an electric pump, a pressurized gas cylinder or any other source of gas pressure (page 5, line 29- page 14, line 22). Wilson does not explicitly teach a computer-controlled pressure-altering device attached to the housing in a pressure-tight manner, that changes the pressure within the housing relative to the pressure outside the housing. However,

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such a control means is considered conventional in the art and usually required in large scale liquid transfer systems.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included in the liquid transfer apparatus of Wilson, a computer-controlled pressure-altering device in order to allow for the transfer the liquid samples automatically and to ensure that a correct pressure is generated and therefore an accurate amount of liquid sample dispensed. Further, it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. *In re Venner*, 120 USPQ 192.

Response to Amendment

14. Bracketing or underlining are commonly used to indicate amendments or changes in the claims as provided in 37 CFR 1.121(a)(2)(ii) and are normally not intended to be printed in the published patent. In the reply filed June 14, 2000 applicant has used underlining in such a manner that it is unclear to the examiner whether the underlining is intended to appear in the patent. The underlining is unclear because it is not used when submitting new claims, underlining is only used in the addition of limitations in existing claims. New claims 31-35 must be submitted without underlining. If underlining and/or bracketing is intended to appear in the claims in the published patent, such intention must be clearly indicated in applicant's reply to this notice.

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Response to Arguments

15. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection. See above Office Action.

Allowable Subject Matter

16. Claim 14 is allowed.

17. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach or suggest whereby solutions are deposited and removed in either direction from a container having at least two capillaries, including the deposit of two or more solutions to be mixed and removal of a resulting mixture by an additional capillary.

Conclusion

18. Claims 1-13 and 31-35 are rejected

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37


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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure are Bunce et al. and Natelson for the teaching of a liquid-handling system for transferring liquid back and forth from at least one container to a second container.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to P. Kathryn Bex whose telephone number is (703) 306-5697.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0651.


P. Kathryn Bex
Patent Examiner
Group Art Unit 1743
August 21, 2000


Jill Warden
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